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Integrated Management Information System project

Tenth progress report of the Secretary-General

Summary

Since the ninth progress report (A/52/711), the development of the Integrated Management Information System (IMIS) has proceeded at a sustained pace. Deployment to offices away from Headquarters continued. Other users, United Nations Development Programme, United Nations Children's Fund and the International Labour Organization, progressively adapted the IMIS software to their special requirements. The Organization noted with satisfaction the report of the independent experts requested by the General Assembly, which favourably evaluated the IMIS system, both from the technical and cost perspectives. The experts' suggestions have been acted upon. The recommendations of the Board of Auditors and the requests of the General Assembly have been already addressed to a large extent.

The present report comprises:

(a) An overall description of the status of the activities related to IMIS development and implementation, and a description of the programme of work over the next two years, accompanied by revised budget estimates as requested by the General Assembly;

(b) An annex containing a detailed description of the activities undertaken over the past ten months, by area of activity (annex I);

(c) An annex containing a detailed justification for the resources being requested (annex III);

(d) Three annexes describing the actions taken in response to the recommendations of the independent experts (annex II) and the Board of Auditors (annex IV), and the requests of the General Assembly (annex V).

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Over the past year, the new version of Release 2 (Staff entitlements) has been successfully implemented worldwide; major enhancements to Release 3 (Finance and support services) have been developed; progress has been achieved in the development of Releases 4 (Payroll and related functionalities) and 5 (Operational applications); the reporting facility has been enhanced and additional reports have been made available to the end users; and research in the technical area, in particular for remote accessing to the system, has progressed. Globally, the system continues to support a large and ever increasing number of administrative processes and users, both at Headquarters, offices away from Headquarters and at other organizations.

The next step will see the implementation by February 2000 of Release 3 at all offices away from Headquarters, and the implementation of Releases 4 and 5 in New York in August 1999 and at all major duty stations by August 2000.

Although much progress has been made, the complexity of the remaining tasks should not be underestimated. The implementation of a new payroll at eight duty stations in little more than one year and of the financial applications at seven duty stations in less than one year will certainly require an unprecedented effort on the part of the staff and management at all duty stations to prepare data, undertake training, reorganize work flows and adjust to a completely new way of conducting business. It should be recalled in this connection that many new automated processes, such as funds availability verification, education grant, travel, time and attendance, manually processed to date, will be introduced for the first time at most locations. The implementation schedule is very ambitious, and to limit the risks of failure the completion date of the implementation of the system had to be postponed, until the third quarter of the year 2000.

As requested by the General Assembly, the overall costs to completion of the project have also been reviewed. In the ninth progress report, additional resources in the amount of $10.4 million were requested. The General Assembly approved a total of $5.5 million, bringing the total approved budget for the project to $68.1 million, and requested the Secretary-General to submit revised estimates, taking into account the recommendations of the Board of Auditors and of the independent experts. The additional estimated requirements over and above the budget approved to date by the General Assembly amount to $9.5 million, of which $3.0 million is to be expended during the biennium 2000–2001. Of that $9.5 million, $6.5 million is directly related to the implementation activities at offices away from Headquarters, such as data collection and clean-up, data conversion, bridges and interfaces, training and hardware upgrade. It should be noted, however, that all other activities, such as enhancements to the system, benefit both Headquarters and offices away from Headquarters.

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I. Introduction

1. The purpose of the Integrated Management Information System (IMIS), which was approved by the General Assembly in section XII of its resolution 43/217 of 21 December 1988, is to develop an integrated system for the processing of, and reporting on, administrative actions at all major duty stations. IMIS is progressively replacing the numerous independent systems, many of which, built many years ago and mostly for regular budget activities, are no longer able to provide the support needed by management at a time of rapidly changing needs and increasing demands by extensive peacekeeping activities and those financed from extrabudgetary resources. The main areas covered by the system are: personnel management; post management; accounting; procurement; travel; payroll; and budget execution. The Secretary-General has submitted nine progress reports, in 1989 (A/C.5/44/8), 1990 (A/C.5/45/20), 1991 (A/C.5/46/24), 1992 (A/C.5/47/27), 1993 (A/C.5/48/12), 1994 (A/C.5/48/12/Add.1), 1995 (A/C.5/50/35), 1996 (A/C.5/51/23) and 1997 (A/52/711).

2. Release 1 of the IMIS system, comprising personnel applications, was installed at Headquarters in September 1993. Release 2, personnel entitlements, and Release 3, financial and support services applications, were implemented in April 1995 and 1996 respectively. An improved version of Release 2 was implemented in April 1998. In early 1994, a thorough reprogramming and rebudgeting of the project was undertaken with the aim of redefining the level of resources that were estimated at that time to be required for its completion. The difficulties that followed the implementation of Release 3 at Headquarters and the observations and recommendations made by the Board of Auditors led to a further revision of the project budget at the end of 1997. In July 1998, at the request of the General Assembly, a team of independent experts conducted a review of the system and of the project; their report is being submitted under separate cover (for actions taken in response to its recommendations, see annex II).

II. Status of the project

3. During the period under review, IMIS continued to be extensively used, in particular at Headquarters and at Geneva (see annex I, table; and annex I, paras. 11 and 15), confirming the validity of the design and its increasing reliability. Its usage by the United Nations Development Programme (UNDP) was expanded following their implementation of Release 2. The United Nations Children's Fund (UNICEF) also successfully implemented Release 1. As described in the ninth progress report (A/52/711) and as reported by the Board of Auditors in their report (A/52/755), several corrective actions had to be undertaken to improve the operations of the system and to complete its implementation worldwide. Some of these actions had already been initiated when the ninth progress report was issued. Several priority areas had been identified. The progress made on each one of them is described below.

4. The standardization of data for personnel and finance was completed in order to allow the implementation of Release 2, the determination of staff entitlements, and for the subsequent implementation of payroll. This effort comprised conversion of data, comparison of IMIS and payroll data, and data collection, as well as population and maintenance of reference tables used for determining benefits and, subsequently, payroll. Similar processes were undertaken at all other duty stations. Release 2 was successfully implemented at six other duty stations (Addis Ababa, Bangkok, Beirut, Geneva, Santiago and Vienna), and will be implemented at Nairobi during the last quarter of 1998. Verification and comparison of data between IMIS and payroll will continue on a regular basis until implementation of payroll.

5. Release 3, finance and support services applications, needed to be enhanced to facilitate the processing of transactions, to eliminate data errors generated either by system malfunctions or by conversion-related issues, and to facilitate the implementation of the release at offices away from Headquarters. During the first quarter of 1998, changes to eliminate data errors were implemented and the errors themselves were corrected. In addition, a list of 44 priority changes to be developed and implemented in stages during the course of 1998 and at the beginning of 1999 were defined. These are being developed in parallel with other changes required mainly by UNDP for its incoming implementation of Release 3. Some of the changes were migrated to production during 1998. A major new release of the software will be introduced in January 1999. By that date, 33 of the 44 changes will have been implemented. Five others, concerning payroll, will be delivered with the related payroll components. The others, at various stages of development, will be delivered during the first quarter of 1999. In parallel to these changes to be effected by the main contractor, other changes and enhancements were developed and implemented on an ongoing basis by United Nations staff to improve the system. All these improvements were considered essential and were identified, thanks also to the increased usage of the system and increasing demands arising from a better understanding of its capabilities.

6. The difficulties that followed the implementation of Release 3 had led to delays in the preparation of financial statements. The Board of Auditors had recommended that the review of processes, reports and procedures to facilitate the preparation of the financial statements be undertaken. With the correction of data errors, the development of additional standard reports and a better knowledge of the system on the part of the staff in the Accounts Division, the preparation of the final statements for the biennium 1996/1997 did not encounter delays. The same also applies for the closing of the peacekeeping accounts for the period ending on 30 June 1998.

7. As also pointed out by the Board of Auditors, the lack of adequate reports had been, among others, one of the reasons for the difficulties that followed the implementation of Release 3. New reports were developed, both for the use of the Office of Programme Planning, Budget and Accounts and of executive offices, and existing reports were enhanced to better meet operational needs. This sustained effort will have to continue until the end of 1999, and resources are being requested accordingly (see para. 27 below; annex I, paras. 44 to 49; and annex III, para. 9).

8. Another reason for the earlier delays in the preparation of financial statements had been identified in the inadequate operations of bridges and interfaces bringing data into IMIS from other systems and other duty stations. Enhancements were made to the interfaces related to the reimbursement of income taxes to staff, to after-service health insurance for retirees and their eligible dependents, and to the recording of inter-office vouchers with offices away from Headquarters. The bridge that brings data to and from the current payroll system was also modified. Further work required in this area over the next few months will continue to be performed by United Nations staff.

9. Another priority activity that had been identified was the takeover of the maintenance of the system by the United Nations to reduce dependency on the main contractor. Progressively and incrementally, most of the ongoing activities related to system fixes, system enhancements related to all releases, bridges and interfaces, and technical operations have been taken over by the United Nations. Release 2 was implemented at all locations exclusively by United Nations staff from the Office of Human Resources Management, the Office of Programme Planning, Budget and Accounts, offices away from Headquarters and the IMIS team. The main contractor continued to work on the development of Releases 4 and 5, payroll and system operations, and to the enhancements to the system. In 1999, with the completion of those tasks, the main contractor will phase out and the United Nations will complete the takeover of the system. The independent experts have recommended that that transfer of responsibilities be accompanied by a transitional support to be provided by a small team of contractors staff (see annex II, recommendation 6).

10. As recommended by the Board of Auditors and requested by the General Assembly, the contract with the main contractor was revised. Negotiations were conducted over the first half of 1998. They led to the better definition of the work to be performed by the contractor, the clarification of warranty provisions, the redefinition of deliverables to the United Nations and an improved monitoring system for invoices (see annex IV, recommendations (f) and (g); and annex V, requests 9 and 10).

11. Technical enhancements to the system were introduced to improve its response time and reliability, in particular by eliminating conflicts among processes accessing the same data, improving inquiry and selection screens, and optimizing the response time of the expert system that processes the automatic posting of financial transactions to the general and subsidiary ledgers and calculates the entitlements of the staff. While the initial version of Release 2 had to be switched off in the fall of 1996 due in part to the negative impact it had on the response time of the system, thanks to the improvements made the implementation of the new version of Release 2 in April 1998, it did not affect the overall performance of the system.

12. Activities have been undertaken since the second quarter of 1998 to ensure that IMIS is fully year 2000 (Y2K) compliant, including verification of the IMIS software itself; verification of the software tools used by IMIS, and if not compliant, testing of the Y2K compliant versions before migration to production; verification of the systems that interface with IMIS; and verification of the hardware. Work is well advanced, and is expected to be completed during the second quarter of 1999.

13. The main activities that remain to be undertaken concern the implementation of payroll at Headquarters in August 1999 and subsequently at all other duty stations between February and August 2000, and the implementation of Release 3 at the offices away from Headquarters except for the United Nations Office at Nairobi in 1999 (the latter will implement it early 2000). The completion of the implementation of the system by all duty stations had to be postponed from the end of 1999 to August 2000 (see annex I, paras. 31 and 32).

14. At the request of the General Assembly, during the month of July 1998 two independent experts conducted a thorough study of the IMIS project to assess the system from

a technical point of view, to advise on the long-term maintenance and operational requirements, and to advise on possible strategies for improving the system and for its maintenance.

15. The study is being submitted to the General Assembly under separate cover. The experts found that the system is well designed and robust, that it has been successfully integrated with commercial packages, and that the development and implementation effort was hindered principally due to the lack of available resources on the development team and in the user areas. These resources had to be shared among competing priorities. They also noted that IMIS has not failed like many similar initiatives elsewhere, and that the level of investment appears to be reasonable for the outputs which have been produced.

16. The experts' recommendations are listed in annex II, along with actions taken in response to them.

17. In summary, the main activities planned for the next two years relate to:

(a) Implementation of Release 3 at all offices away from Headquarters except for the United Nations office at Nairobi in 1999, and at Nairobi in early 2000 (see annex I, sect. F);

(b) Implementation of Releases 4 (payroll) and 5 (operational applications) at Headquarters by August 1999 and at all duty stations to be completed by August 2000 (see annex I, sect. F);

(c) Completion of 90 reports that are under construction and development of more than 110 additional standard reports, to be completed by December 1999 (see annex I, sect. I);

(d) Take over of the maintenance by United Nations staff, to be completed by December 1999 (see annex IV, recommendations (h) and (i));

(e) Creation of a common service with other user organizations for the maintenance of the system. Subject to approval by the governing bodies of each organization, this could be established in January 2000 (see annex I, sect. M);

(f) Technical enhancements to improve system performance and reliability and to ensure that the system is year 2000 compliant. This will be an ongoing task, with the exception of the part related to the year 2000 that is to be completed by June 1999 (see annex I, sect. J);

(g) Establishment of an ongoing training programme in IMIS as part of overall staff training. The IMIS team, in consultation with the Office of Human Resources Management, will establish the basis for such a programme (see annex I, sect. K);

(h) Completion of the research already undertaken to access IMIS remotely, using recent technological innovations made available by the industry (see annex I, sect. L).

18. As described in detail in annex III below, the additional resources that are requested concern principally:

(a) Staffing at offices away from Headquarters for implementation-related activities. Some of those activities will relate to data collection and clean-up. As in the past and in order to present IMIS project-related costs in a consolidated manner, those activities will be charged to the IMIS project budget rather than be distributed across the various budget sections of the offices concerned;

(b) Staffing at Headquarters to plan and implement the system at offices away from Headquarters;

(c) Assistance by the main contractor during the transition to full takeover of maintenance by the United Nations, as recommended by the independent experts;

(d) Some enhancements for which limited assistance from the main contractor may be required;

(e) Staff and contractual costs for the development of additional reports.

III. Budgetary matters

19. As reported in the ninth progress report, the rescheduling of Release 3 and the additional work required for the refinement of Release 2 affected the implementation for Release 4 at Headquarters and for Releases 3 and 4 at offices away from Headquarters. The delay encountered and the unforeseen additional work led to an increased level of resource requirements. Accordingly, the ninth progress report included estimates of requirements for the biennium 1998–1999 and until project completion. Total projected expenditures up to the end of 1997 were estimated at $58.2 million, against the approved amount for the full project of $62.6 million. The total cost of the project, as estimated in the ninth progress report, amounted to $72.9 million, reflecting a net increase, at that time, of $10.3 million. Actual expenditure up to 31 December 1997 amounted to $57.7 million. The unexpended balance of $4.9 million, of the total approved amount of $62.6 million, has been carried forward and included in the revised estimates of expenditures for the period 1998 until project completion.

20. The $5.5 million of additional funds approved by the General Assembly at its fifty-second session brings the total amount approved for the project to $68.1 million. Of the latest approved amount of $5.5 million, $3.0 million was to be encumbered only upon the approval of the Advisory Committee on Administrative and Budgetary Questions. The Committee has since then approved the encumbrance of $2.3 million, and the encumbrance of the remaining $0.7 million is to be considered in the context of the 1999 requirement.

21. The General Assembly, it its resolution 52/227 of 31 March 1998, requested the Secretary-General to include in its tenth progress report a detailed plan of action and the final level of resources needed to resolve all outstanding problems so as to make the system fully operational, taking into account, among others, the report of the independent experts. The revised total cost of the project, re-estimated on the basis of the report of the independent experts, would amount to $77.6 million.

22. As shown in the table, with the current revision the overall cost of the project from inception to the project completion is estimated at $77.6 million, reflecting an increase of $9.5 million over the amount of $68.1 million approved to date by the General Assembly.

23. The changed level of requirements are explained below. They are related mainly to staff costs for implementation at offices away from Headquarters, and contractual costs pertaining mainly to reporting and completion of the takeover of the system from the contractor, partially offset by reduced overall requirements in respect of travel, training, and acquisition of hardware and software. Detailed justification is contained in annex III.

Staff costs (Increase: $6.4 million)

24. The costs of project staff are budgeted under temporary assistance. As against the budgeted amount of $14.2 million for the period 1989–1997, expenditures as of December 1997 were $12.3 million. The difference of $1.9 million has been carried over and included in the projected expenditures for the period 1998 until project completion.

25. The increased level in the revised estimate is related mostly to the requirements for implementation at offices away from Headquarters. The increased level of resources is required for the extension, until the project completion, of the implementation team and local implementation coordinators at offices away from Headquarters, and the payroll development team to assist in the implementation of payroll at offices away from Headquarters. Other expenditures are related to additional temporary staff needed at offices away from Headquarters to assist in implementation activities of the various releases of the system.

Revised estimates for the development and implementation budget of the Integrated Management Information System

(Thousands of United States dollars)

	Funding approved by the General Assembly until the end of fifty-second session (1)	*Expenditure as of 31 December 1997 (2)*	*Estimated expenditure 1998 to project completion (3)*	*Revised total cost of the project (2)+(3) (4)*	*Increase/decrease (4)-(1) (5)*
General temporary assistance	14 157.00	12 309.02	8 212.35	20 521.37	6 364.37
Travel	2 413.80	603.62	546.27	1 149.89	(1 263.91)
Training	5 440.40	2 218.31	2 463.00	4 681.31	(759.09)
Contractual services	39 870.40	37 581.11	8 178.00	45 759.11	5 888.71
Communications	272.10	283.86	17.90	301.76	29.66
Supplies/miscellaneous	196.20	187.71	48.00	235.71	39.51
Hardware	3 426.60	2 815.28	290.00	3 105.28	(321.32)
Software	2 309.90	1 724.47	100.00	1 824.47	485.43)
Total	**68 086.40**	**57 723.38**	**19 855.52**	**77 578.90**	**9 492.50**

Contractual services/consultants (Increase: $5.9 million)

26. As reported in the ninth progress report, the expenditures under this heading until December 1997 were estimated at $36.9 million. As of December 1997, the actual expenditure was $37.6 million, exceeding the projected estimate by $0.7 million. The overexpenditure was mainly owing to the need for contractors' services for developing reports.

27. The increased level of resources under this heading are required for the contractual services for the development of additional reports, for out-of-scope items that may arise during the extensive testing foreseen for payroll, including bridges, interfaces, reports and monitoring tools and additional requirement by offices away from Headquarters, and for keeping on board for a period of one year four contractors to facilitate the transition to a total United Nations maintenance of the system after the departure of the main contractor, as recommended by the independent experts.

Travel (Decrease: $1.3 million)

28. As against the projected expenditure of $0.7 million, the actual expenditure under travel as of the end of 1997 was $0.6 million. The underexpenditure is attributable to the continuation of measures to minimize travel expenditures, including combined trips by Headquarters staff to more than one duty station at a time. The decrease in the revised requirement under this category would partly offset the increase under other items.

Training (Decrease: $0.8 million)

29. Expenditure under training as of the end of 1997 was $2.2 million, as compared to an earlier estimate of $2.9 million. This and projected underexpenditures are mainly due to the administration and conduct of training by United Nations staff. The overall decrease in the revised estimate for training would partly offset the increase under other items.

Hardware and software (Decrease: $0.8 million)

30. While the actual expenditure for acquisition of hardware and software as of December 1997 more or less matched the projected expenditure, the overall estimated requirement has been revised after taking into consideration the requirement of offices away from Headquarters for additional servers. The overall decrease is based on the favourable prices of hardware and software currently available.

IV. Conclusion and recommendation

31. The development and implementation of the project has undergone tremendous difficulties. As reported in previous reports, most of those difficulties were unforeseen and required additional technical and financial resources. Most of those difficulties have since been overcome, the parts of the system that have been implemented work satisfactorily and the project is expected to be completed within the next biennium with the system fully operational at all duty stations.

32. The General Assembly may wish to:

(a) Take note of the plan of action and the level of resources required for the completion of the Integrated Management Information System project, as described in the present report;

(b) Approve the request for additional funds for the completion of the project at a total cost of $77.6 million;

(c) Note that, of the additional amount of $9.5 million required for the completion of the project, $3.0 million would not be required until 2000–2001;

(d) Approve an amount for the IMIS project of $6.5 million, to be appropriated under section 27D of the programme budget for the biennium 1998–1999.

Annex I

Activities undertaken since the ninth progress report

A. Release 1: Human resources

1. Release 1 supports, among other things, the processing of all personnel actions required for the management of staff of all categories and grades; the skills inventory of staff and the rostering of applicants; the monitoring of the recruitment process, including job classification; the security set-up for accessing the system and performing specific transactions; and the maintenance of values in reference tables used for the processing of all types of transactions. The reference tables, including the salary scales, are maintained centrally in New York by the Office of Human Resources Management, and will be transmitted electronically to all duty stations and other user organizations every time they have been updated.

2. With the successful implementation of Release 1 in the Economic and Social Commission for Western Asia in February 1998, IMIS became operational at all major duty stations of the Secretariat (New York, Addis Ababa, Bangkok, Beirut, Geneva, Nairobi, Santiago and Vienna).

3. Monthly statistics on staff are provided electronically by each duty station to the Office of Human Resources Management at Headquarters. Summary data is also provided on an ongoing basis by each duty station in electronic format, as and when required by the management of the Organization. With the expected improvement in communications, the frequency of updates to Headquarters will increase. With the implementation of Release 3 at these locations, worldwide data on other categories of personnel, such as consultants and contractors, will also become available.

4. This release has also been implemented by the ILO, UNDP and UNICEF. Altogether, it is estimated that about 27,000 staff of the United Nations common system are now being administered through IMIS.

5. A number of improvements to Release 1 were implemented in April 1998. These changes were coordinated and financed by each user organization (United Nations, UNDP, UNICEF and the ILO), and each organization benefited from the changes requested by others. One enhancement addresses the recruitment-tracking functionality. This part of the system, as pointed out by the Board of Auditors, has not yet been implemented by the United Nations. The Office of Human Resources Management is now examining the modalities for its implementation within the framework of the change programme in the recruitment and placement procedures.

6. The United Nations team, also in consultation with the other user organizations, is currently reviewing requests for change, and will determine with the users those that should be implemented as a matter of priority. Work will also be undertaken to support the human resources reform programme, which has a main component related to automation.

B. Release 2: Staff entitlements

7. Release 2 automates the determination of staff benefits by applying, after each personnel action, the staff rules and related calculations to the contractual situation of each staff

Release 1 usage, as of 30 September 1998

	UNHQ	*UNOV*	*ESCAP*	*UNOG*	*ECLAC*	*UNON*	*ECA*	*ESCWA*
Live date	9/93	6/96	8/96	3/97	4/97	6/97	10/97	2/98
Number of registered users	1 459	51	49	211	73	109	20	55
Number of transactions since implementation: personnel actions approved	153 210	6 444	3 760	20 332	3 469	5 099	3 301	1 170
Database size								
No. of staff member records	7 745	839	627	3 426	578	1 187	702	245
No. of household members records	12 289	1 407	1 599	7 459	1 346	2 277	2 112	675

member. The output forms the basis for the payroll computations to be implemented in Release 4. As reported in previous progress reports, Release 2 was re-engineered to improve performance, refine its logic and standardize the rules.

8. The new version of Release 2, developed in close consultation with UNDP and UNICEF, was implemented by the United Nations Secretariat in New York in April 1998 and in all duty stations except Nairobi between June 1998 and September 1998. The United Nations Office at Nairobi continues data clean-up activities, and will implement Release 2 during the last quarter of 1998. UNDP also implemented it. UNICEF is scheduled to implement it during the last quarter of 1998. The ILO is working at customizing it to meet their specific requirements in selected areas. The implementation of Release 2 addresses one of the recommendations contained in the report of the Board of Auditors of December 1997 (see annex IV, recommendation (b)).

9. The successful implementation of the new version of this release required, *inter alia*, data verification, to ensure consistency of records between IMIS and payroll and the loading into the system of reference tables, including more than 480 different salary scales in more than 150 currencies and collection and conversion of data.

10. The following entitlements are calculated by the system: gross salary, staff assessment, dependency allowance, adjusted dependency allowance, post adjustment, hardship, mobility and non-removal elements of the mobility and hardship allowance, pension contribution, language allowance, recruitment allowance, salary differential and non-resident's allowance. Termination indemnity, death benefits and repatriation grant will be implemented with the end-of-service personnel action which is scheduled for migration with Release 4.

11. Since the implementation of the new version of Release 2 at Headquarters, more than 12,000 personnel actions have been approved and the system has recomputed the entitlements of 5,367 staff, creating more than 21,000 records for payroll processing.

12. The six training courses given at United Nations Headquarters for the implementation of Release 2 were videotaped and copies made for the offices away from Headquarters and for the ILO, UNDP and UNICEF to assist them in their Release 2 training.

13. In June 1997, the first part (advances), of the education grant processing had been introduced; the second part (claims) was implemented in April 1998. As of the beginning of October 1998, more than 3,400 claims and more than 2,800 advances had been processed.

C. Release 3: Financial and support services applications

14. As indicated in the previous progress reports, Release 3 comprises finance and support services applications, and is by far the most extensive and complex of the system. It supports, among others, budget execution, funds control and obligations, payables, receivables, cash management, accounting, procurement, travel and inter-office vouchers (see A/C.5/50/35, paras. 30 to 51).

15. During the period 1 April 1996–14 October 1998, more than 630,000 financial transactions were processed in IMIS. They included 122,000 payment requests, 105,000 receivables, 81,000 pre-encumbrances of funds, 69,000 obligations and 44,000 disbursements.

16. Travel processing was implemented in September 1997. On average, over 800 travel requests are processed each month, and cumulatively more than 10,000 have already been processed. Since its implementation date, over 40 changes have been prioritized and implemented to further enhance the travel request and travel claim processing. The majority of travel authorizations cover three types of travel: official business (6,675), missions (1,558) and home leave (818).

17. Changes are also being effected for the processing of electronic funds transfer payments through electronic data interchange with financial institutions, which will be used both for payroll and for payments to vendors and third parties. Interfaces between IMIS and a specialized commercial package are under construction, and are expected to be completed by May 1999.

18. For the management and tracking of technical cooperation activities, changes are being introduced that will allow the recording of allotments and other project-related data previously held in the legacy Project Management System. These functionalities will be extensively used by offices away from Headquarters, where the percentage of extrabudgetary funds as compared with regular budget funds is higher than at Headquarters.

19. The IMIS project team, together with the Procurement Division and the Facilities Management Division, have tested the modifications requested by the United Nations to the fixed assets module of the procurement software package integrated with IMIS. Its implementation in the

departments/offices at Headquarters is scheduled for the first half of 1999.

20. Upon completion of the work currently under way, the IMIS team and the Office for Programme Planning, Budget and Accounts will review the list of requested changes and prioritize them for inclusion in the 1999 work plan.

21. As recommended by the Board of Auditors, as of February 1998 eight diagnostic tools have been developed and are run on a regular basis. They monitor the status of funds, ledger balances and ledger entries, funds and documents balances in ledger entries, interfund balances, obligations and pre-encumbrances, obligation document details and payable documents. They allow an early identification of data issues that may arise in the system.

22. Every system by its nature is in constant evolution. This is common in both custom-developed and off-the-shelf packages. Although, as described above, major progress has been achieved, there are still many enhancements that users would like to see implemented. Priority will be given to the purging and archiving of data, an activity that thus far had to be postponed due to other more urgent requirements. Work will continue to progressively address them. It is expected, however, that during 1999 most of the staff resources will be dedicated to supporting the implementation of Releases 3 and 4 at offices away from Headquarters. The possibility cannot be excluded that additional systems-related problems will surface and will need to be addressed, as is to be expected in a system the size and complexity of IMIS.

23. The work undertaken in 1998 allowed United Nations staff to increase their knowledge of the system. Among other things, this resulted in reliable operations of the system, which had virtually no unscheduled downtime during 1998 in spite of its very heavy usage.

D. Release 4: Payroll, time and attendance, insurance and rental subsidy

24. This Release comprises about 40 different functional modules. The definition of requirements that had been completed in 1991 was carefully reviewed with the active participation of users from the Office for Programme Planning, Budget and Accounts, the Office of Human Resources Management and offices away from Headquarters. This analysis resulted in a list of new or revised functionalities, which was incorporated in the overall work plan. Work has steadily progressed, and certain functional modules of the Release have already been tested. At the end of August 1998, the contractor notified the Organization that it would not be in a position to deliver the software on schedule. The delay is due to an underestimation of the complexities related to this task, in particular the frequency and extent of retroactive changes as well as future transactions.

25. The software will be tested in three phases:

(a) Testing of each individual component as and when each is delivered (to be completed by the end of February 1999);

(b) System and integration testing of all the components together and with the other parts of the system with which they interact (human resources data, Release 2 data etc.) (to be completed by mid-April 1999);

(c) Testing of the IMIS payroll output with the output of the current payroll to identify possible inconsistencies potentially requiring software adjustments (to be completed by mid-July 1999).

The implementation date is therefore scheduled for August 1999 at Headquarters.

26. As of the end of September 1998, the status of the development of Release 4 was as follows:

(a) *Rental subsidy*: completed and successfully tested. Training materials and a conversion programme have been completed;

(b) *Personal insurance*: completed and under system testing. Training materials have been completed. A conversion programme is under construction;

(c) *Time and attendance*: scheduled for delivery and testing during the last quarter of 1998. Training materials have been completed. No conversions are being planned since there is currently no consistency in the electronic recording of data, when available;

(d) *Payroll*: most on-line parts (data entry screens) have been designed and coded and are to be tested during the last quarter of 1998. Batch processes are being designed and coded, and are scheduled to be delivered for testing between December 1998 and mid-January 1999.

E. Release 5: Data distribution, enhanced queueing, enhanced word processing integration

27. Release 5, which is being developed in parallel with Release 4, comprises:

(a) *Data distribution*: this includes centrally maintained reference tables (e.g., salary scales), which once updated at Headquarters will be automatically distributed to other offices and organizations. It also includes other data exchange to support the movement of staff from one duty station to another, to merge data from the various duty stations for worldwide reporting, to automate processing of interoffice vouchers and to replicate data of staff members and other persons;

(b) *Enhanced queueing*: the queueing mechanism is being used to notify users that a transaction is required to be completed by them. It also allows the monitoring of the completion of the various processes that require many steps and approvals. The existing mechanism will be improved by making it consistent across the various types of transactions;

(c) *Enhanced word processing integration*: word processing is already used for the procurement processing. It will be extended to some other parts of the system.

28. Release 5 is expected to be implemented in stages during the first half of 1999.

F. Offices away from Headquarters

29. As indicated above, Releases 1 and 2 are now currently in operation at all major duty stations, with the exception of Release 2, which is to be implemented at Nairobi in fall 1998.

30. Statistics on the usage of the system at offices away from Headquarters are contained in the table.

31. The main activities during 1999 will be the implementation of Release 3 at six duty stations and the implementation of payroll at one duty station. These releases will be implemented at the remaining duty stations between January and August 2000.

32. Although preparatory activities have been initiated and are currently under way, it has been determined, in consultation with the Office for Programme Planning, Budget and Accounts, that it would be in the best interests of the Organization to delay the implementation of Release 3 until its new version, available as of January 1999, is implemented at Headquarters and has been operational for a few months. The availability of more reports, the diagnostic tools and the experience gained at Headquarters will also facilitate implementation at those offices.

33. One of the major difficulties encountered in the implementation of Release 3 at Headquarters has been the conversion of old data into the new system. Data elements may be missing in the current systems, and some of them contain only a very limited number of edits and validations to ensure consistency of data. A major effort will therefore be required for data verification, clean-up and, whenever necessary, data collection. Additional resources are being requested to support this effort by offices away from Headquarters.

34. Since the best knowledge of the system resides with the IMIS team, the implementation effort will have to be coordinated by the IMIS team, in close cooperation with the Office for Programme Planning, Budget and Accounts, the Treasury, the Procurement Division, and the Travel and Transportation Section.

35. The Release 4 software, including on-line training and other training materials, will be available at all duty stations shortly after its implementation at Headquarters. In this way, staff at all duty stations will have several months to familiarize themselves with the software. Wherever possible, it is also planned to provide offices away from Headquarters with remote access to the Release 4 testing environment in New York.

36. Specific Release 4 functionalities, such as time and attendance, and insurance and rental subsidy, will be implemented incrementally and ahead of the payroll module in order to limit the number of functionalities to be implemented at the same time.

37. In view of the delay in implementation there will be a need to maintain the current systems in operation for some time for retroactive processes and reports. As recommended by the independent experts, all other duty stations but ESCWA have undertaken to upgrade their payroll and accounting systems to make them Y2K compliant. Even after IMIS Releases 3 and 4 implementation, the legacy systems may continue to be needed for reporting and retroactive processing. Releases 3 and 4 are scheduled to be implemented at ESCWA during 1999.

38. The planned implementation schedule is very ambitious, and will require the full commitment of all staff working in the finance area both at Headquarters and at offices away from Headquarters. Although the quality of the software and the knowledge of United Nations staff at Headquarters should facilitate implementation, difficulties are to be expected in view of the volume and complexity of the tasks to be undertaken.

G. Technical research and infrastructure

39. The primary technical activities aim at providing day-to-day support for IMIS development, testing, and training activities and conducting research and development. This work is done in close cooperation with the Information Technology Services Division and other technical areas of the United Nations and related agencies. The objective is to ensure a stable and reliable development environment that supports the programming, testing and research activities of more than 100 staff in four buildings and among United Nations staff, users, contractors and UNDP, the ILO and UNICEF users.

40. If the workload permits, a special project will be undertaken in 1999 to review the possibility of having standard forms, such as travel requests, travel claims and education grant claims, made available on-line so that they can be completed by staff members and used for upload into IMIS. Although that technology is available, a considerable amount of research and testing needs to be conducted to ensure security, integration with IMIS and auditability.

41. Most of the technical activities related to development were initially performed by the main contractor and have now been assumed almost entirely by the IMIS team, which has been strengthened with the addition of two UNDP staff.

42. Other technical activities are undertaken in close cooperation with the Information Technology Services Division. The independent experts have stressed the need to improve telecommunications between Headquarters and the offices away from Headquarters. Such an improvement will facilitate, among others, exchange of data between duty stations and Headquarters, on-line real time access to local data by Headquarters senior management, and remote diagnostics and troubleshooting of hardware and software.

43. The Information Technology Services Division completed the set up of a data transmission connection between New York and Vienna, Bangkok, Geneva, Nairobi and Santiago. Beirut should be connected during the fourth quarter of 1998. Since there is no connectivity to Addis Ababa, ECA and the Division are researching the possibility of using a virtual private network for this purpose, an emergent technology that provides secure and private communications using the worldwide Internet.

H. Reports development

44. Weaknesses in the reporting system, from lack of reports and incomplete reports to response time issues, have hampered the implementation of Release 3. Several data-extraction tools have been made available to the users on the basis of their specific needs: through the formal reporting application, through standardized queries from the database, and through ad hoc queries. The access to the formal reporting application is available not only to the Department of Management but also to the departments that can generate reports concerning their own areas as and when required.

45. Additional operational reporting requirements of the Department of Management offices are satisfied through pre-programmed queries directly from IMIS. Because they are required by a limited number of highly specialized staff, such reports need not be incorporated into the main reporting facility. Finally, ad hoc queries are made by selected staff against the database covering special requirements.

46. Until the end of the biennium, reports development will remain primarily the responsibility of the IMIS project team, and it is expected that that function will progressively be transferred to the central units in the Department of Management offices concerned. The number of reports that had been initially requested when the analysis of the project had been completed amounted to less than 60. The total reports now in production number 255, while 90 are under development and 115 still need to be developed. During 1998, to date 51 new reports have been migrated to production and 50, of which 24 are financial, have been redesigned and enhanced. The increased activity in this area is related to the inadequate assessment of requirements when the project was initiated, and to an increasing awareness on the part of the users of the richness of information available in IMIS. In other words, IMIS is progressively becoming a management tool over and above a processing tool. Currently emphasis is being given to payroll reporting in order also to fully support the testing of this part of the application.

47. One of the main activities that was completed during the first part of 1998 has been the re-engineering of the IMIS reporting facility application to make it more robust, to improve its response time and to provide end-users with additional reporting tools. It should also be noted that the reports developed at Headquarters are deployed at all duty stations, thus giving managers worldwide the same access to information and a consistent reporting mechanism throughout the Organization. These reports have also been made available to UNDP and UNICEF. All these activities are in line with recommendation (k) of the Board of Auditors (see annex IV).

48. The volume and complexity of reports still to be developed requires additional resources. It is relatively

difficult to locate qualified staff who would accept an appointment due to the temporary nature of the functions. This, for example, has led to the resignation of some temporary staff. The work will therefore be performed mostly by contractors, hired from several companies, on the basis of their qualifications and cost. In the budget estimates, this is reflected in a decrease in temporary assistance costs for this activity and an increase in contractors' costs. Additional resources are also sought.

49. In New York, there are currently 479 staff with access to the reporting applications; for offices away from Headquarters, the number is 172.

I. Year 2000 issues

50. Work is well advanced for the verification of all IMIS software components to ensure that the system is fully Y2K compliant. In the system itself, all dates are composed of eight digits, and many expiry dates have gone well beyond 1 January 2000 since the initial implementation. No difficulties are therefore expected in this area.

51. The new version of the operating system for the hardware has been successfully installed and tested at Bangkok, and will soon be installed on all similar machines around the world, including those used for purposes other than IMIS. A bug was identified in another software component, and the software has been upgraded by the vendor.

52. The Information Technology Services Division has established a Y2K laboratory with Y2K compliant hardware. The new Y2K compliant release of the relational database management system used by IMIS is currently being tested by the IMIS team, and will subsequently be installed in this laboratory for further testing before implementation, scheduled for the end of the first quarter of 1999.

53. Testing of the procurement package integrated with IMIS is under way, as well as the check-printing package and the tool used for reporting.

54. A review has also been conducted of all systems that interface with IMIS to determine the course of action required. In order to avoid risks resulting from major unexpected problems that could arise in implementation of IMIS payroll, the current Headquarters payroll system is also being upgraded to be Y2K compliant. This would in any case have been required to take into account the possibility that other organizations that depend upon the United Nations for processing their payroll may not be ready to implement Release 4 before 1 January 2000. In addition, the current payroll system may still be needed, on a transition basis, for computing payments arising from actions that will take effect before the IMIS payroll implementation date and for retroactive reporting.

J. Training

55. During 1998, the main training activities related to:

(a) Training in implementation of new functionalities in Releases 1 and 3;

(b) Training for implementation of Release 2 at all duty stations except Nairobi (scheduled for the last quarter of 1998),

(c) Training in the usage of the reporting tool;

(d) Training or implementation of the second phase of the education grant;

(e) Training for representatives of offices away from Headquarters for the implementation of Releases 2 and 3;

(f) Ad hoc training by the IMIS team, the Office of Human Resources Management (OHRM) and the Office of Programme Planning, Budget and Accounts (OPPBA) on specific issues for selected groups of staff;

(g) Training in IMIS and Release 1 at Beirut for the implementation of Release 1.

56. In addition, the Office of Human Resources Management, in close cooperation with the IMIS team, included IMIS operations and procedures in its newly created series of staff development programmes in human and financial resources management. IMIS-related issues will be integrated, as appropriate, in the design of new programmes.

57. For the next two years, training activities will concentrate on training for the implementation of Release 3 at offices away from Headquarters and for the implementation of Releases 4 and 5 at all duty stations.

58. In addition, with the increased usage of IMIS, in particular at Headquarters, and the mobility of the staff, it has become necessary to develop a more systematic training programme that includes development of videos, on-line training, on-line desk procedures and on-line context-sensitive help.

59. Training sessions will be supplemented by regular users' group sessions, during which specific items will be discussed and, if necessary, further addressed in training sessions for larger groups of users. Plans are being

developed to that end by the IMIS team, in consultation with the Office of Human Resources Management. The budgetary implications, incorporating increased training provisions, will be reflected in the programme budget proposals for the biennium 2000–2001.

60. In parallel, the IMIS team, in cooperation with the Information Technology Services Division, expects to implement an Intranet page for storage and dissemination to the technical support staff at all duty stations and user organizations of all the technical documentation developed over the years. Work has been undertaken to put on the Intranet all the desk procedures and other material already available on line to IMIS users. This will facilitate the access to information to a larger audience at all duty stations, while at the same time simplifying the publishing of such material. This documentation will be supplemented with additional material on the most frequently asked questions and tips for processing particular actions.

61. These activities respond to the request of the General Assembly (see annex V, request 15) and prior recommendations of the Advisory Committee on Administrative and Budgetary Questions and of the Office of Internal Oversight Services and the Board of Auditors.

K. Remote access to IMIS

62. As indicated in the eighth and ninth progress reports (see A/C.5/51/23, para. 57; and A/52/711, paras. 41 and 42), the IMIS team, in cooperation with the Field Operations and Logistics Division and the Information Technology Services Division, has been exploring for some time the possibility of remote connectivity to IMIS. It is the belief of the Administration that such an approach would bring major benefits through the availability of consolidated databases, a reduction in implementation and operation costs of systems at field duty stations and other small offices, the dissemination and usage of consistent procedures throughout the Organization and a larger base of staff trained in the same software. This would allow also the progressive consolidation of operations, such as payroll and IMIS itself, to a smaller number of locations, thus reducing operating costs even further.

63. The remote connectivity to IMIS is also preferred because the deployment of complex administrative applications, even of limited size, to small duty stations would require a major investment in design, implementation, operations and maintenance.

64. Although the Organization has been working at the possible implementation of the solution successfully tested in 1997 (the porting of IMIS to the World Wide Web), new tools that have become available in the market have continued to be reviewed. Very recently, the Information Technology Services Division, the IMIS team and the Field Operations and Logistics Division successfully tested a new tool. The response time was excellent using both United Nations dedicated lines and normal telephone lines. It was, however, still somewhat slow using satellite lines since the tool is optimized for land lines. However, the response time for retrieval of data for inquiry purposes and for generating and producing reports was satisfactory. Additional tests are currently under way from remote locations, and the vendor of the tool is already working on a prototype that may address some of the shortcomings that have been identified by the United Nations. Direct remote access to IMIS was also tested, using a new configuration of the system developed on an experimental basis.

65. The Web solution would require re-engineering of part of the application and thorough retesting of the entire system. The other alternative would not require any re-engineering of the application itself. In both cases, some additional hardware would be required.

66. Subject to further tests, it appears that it is already possible for duty stations that can access solid data-transmission networks, such as those at Bonn or The Hague, to remotely access IMIS. Remote access could also rapidly be granted to peacekeeping missions for data retrieval, pending a review of the solution identified for data entry.

67. A remote access capability is of great interest also to UNDP, UNFPA, the Office for Project Services and the ILO since it would address some of their current requirements in terms of field systems support. Some changes to the system might be required to meet specific field requirements not currently covered by the system.

68. The results of the research and testing will be shared with all other user organizations and with the United Nations Development Group to determine whether a project for further research and for estimating implementation and operations costs could be jointly undertaken within existing resources. The independent experts have strongly recommended that those efforts be continued (see annex II, recommendation 10).

L. Common service

69. The increased usage of the system has led to an increased cooperation among United Nations organizations. This has been accompanied by an increased knowledge of the system by the United Nations IMIS team and IMIS teams in the other organizations.

70. The imminent end of the contract with the main contractor requires that maintenance and support activities be taken over collectively by the user organizations. This would be more cost-effective and ensure independence from outside contractors. Such inter-organizational coordination would become even more essential should a common project for remote accessing to the system become a reality.

71. Already the development of Release 3 enhancements and changes have been closely coordinated between the United Nations and UNDP. A common plan for the development of further enhancements in the area of human resources during 1999 is being coordinated with UNDP, UNICEF and the ILO. UNDP senior staff have already been attending meetings of the IMIS Steering Committee. There is, however, a need for better coordination through a more formal mechanism.

72. Within the framework of the working group on IMIS as part of the Task Force on Common Services, a considerable amount of work has been undertaken to identify issues to be addressed. The independent experts have outlined in their report a possible scenario for the creation of a common service for IMIS, and have recommended that those arrangements be formalized (see annex II, recommendation 8).

73. A study was initiated in mid-October 1998 within the framework of the Task Force on Common Services to prepare a comprehensive report outlining possible alternatives for the creation of such a common service.

Annex II

Actions taken in response to the recommendations contained in the independent experts' study of July 1998

Recommendations	*Comments*
Recommendation 1	
The offices away from Headquarters should make the existing legacy payroll systems year 2000 compliant as a contingency measure in the event that the IMIS payroll system is not implemented in 1999.	All offices away from Headquarters have already launched projects to either upgrade (ECLAC, ESCAP, UNOG, UNON, UNOV) or replace (ECA) their payroll systems. ESCWA's payroll is run at Headquarters. The Headquarters payroll is also being upgraded (see annex I, paras. 37 and 54).
Recommendation 2	
An implementation project manager should be appointed immediately to focus on the detailed planning, scheduling, coordination and monitoring of IMIS implementation activities at offices away from Headquarters. This person will be required to travel frequently to the offices away from Headquarters to manage the implementation.	An implementation project manager has been identified and was expected to assume his duties on 1 November 1998. He will work in close cooperation with the Office of Programme Planning, Budget and Accounts, the Office of Human Resources Management, the offices away from Headquarters coordinator and offices away from Headquarters to finalize the implementation plans and activities. The current plan foresees more travels of staff from offices away from Headquarters to New York than of Headquarters staff to offices away from Headquarters. The two other members of the Headquarters' implementation team have been identified, and are expected to report by the end of November 1998.
Recommendation 3	
The offices away from Headquarters, in consultation with the implementation project manager and the IMIS project team, must prepare a detailed work plan with scheduled resource and funding requirements for the completion of finance and payroll implementation in 1999, and for a sustainable IMIS operations and coordination capability thereafter.	Some offices, such as those of Geneva, Beirut and Santiago, have already completed their plans. Additional resources are being sought to finance data-collection and clean-up activities, building of interfaces and local implementation activities (see para. 18 (a) above; annex III, para. 4; and annex I, para. 33). Concerning future maintenance, this will be dealt with within the framework of the 2000/2001 budget (see also annex V, comments on request 16).

Recommendations	*Comments*
Recommendation 4	
Accounting and systems implementation resources must be identified and/or recruited with some urgency, and trained by the involved substantive offices and the IMIS project team to work on implementation at offices away from Headquarters.	In addition to the implementation manager, the other two members of the implementation team have been identified and are under recruitment. New staff conversant with systems have also been recruited by the Office of Programme Planning, Budget and Accounts and by some offices away from Headquarters and have started working on implementation-related activities. A joint IMIS, the Office of Programme Planning, Budget and Accounts and offices away from Headquarters team has been created, and three offices away from Headquarters staff are currently at Headquarters, working at detailed implementation activities (see annex III, para.5).
Recommendation 5	
The transitional maintenance strategy for placing the central IMIS maintenance unit within the IMIS project team should be adopted until an Inter-Agency IMIS governance framework is in place.	Discussions are taking place with UNDP, UNICEF and the ILO to better coordinate further development activities and usage of resources. Close cooperation has already been established with UNDP concerning financial applications (joint testing, review of specification documents, etc.), while coordination for human resources applications, which has existed since 1994, is being improved through regulatory inter-agency meetings and the preparation of a consolidated plan for enhancements to be implemented jointly during 1999. These activities are coordinated by the IMIS team.
Recommendation 6	
The IMIS project should be funded jointly to undertake the transitional maintenance strategy, plus any maintenance requirements funded by UNDP, UNICEF or the ILO, including a level of up to four contractors, who may be required to supplement the IMIS team in the light of the termination of the activities of the prime contractor.	A request for $1.1 million for the hiring of a transitional team to remain on board after the completion of the contract by the main contractor is included in the budget estimates of the tenth progress report (see annex III, para. 11).
Recommendation 7	
Each United Nations office and offices away from Headquarters should restructure to meet its own substantive IMIS operational maintenance and coordination responsibilities, as detailed in the present report.	The recommendations of the independent experts will be reviewed in detail by the Department of Management and by all offices away from Headquarters (see also annex V, comments on request 16).
Recommendation 8	
The Administration should work with other participating organizations to establish and fund an inter-agency governance framework for IMIS.	A study for finalizing possible scenarios for the creation of the IMIS common service started in October 1998 (see also annex I, paras. 69–73).

Recommendations	*Comments*
Recommendation 9	
The Administration should proceed with some urgency in providing a production data-communications infrastructure for IMIS.	A fundamental review of the connectivity needs to support remote access to facilities, including IMIS, Intranet, the optical disk system and others, is currently under way. The set-up of data-transmission connections between New York and Vienna, Bangkok, Geneva, Nairobi and Santiago has been completed. Work is under way as far as Beirut and Addis Ababa are concerned (see annex I, para. 43). Recent developments in software enable remote access to client-server applications without the need for large dedicated bandwidth. This is currently the subject of detailed technical evaluation (see annex I, paras. 62–68).
Recommendation 10	
The General Assembly should approve funding expenditures for the development of a remote connectivity capability in IMIS to support peacekeeping operations, tribunals and the operations of other interested agencies.	Research is under way (see annex I, paras. 62–68).
Recommendation 11	
The substantive IMIS status and plans, as articulated by each office of the United Nations Secretariat and other IMIS user organizations, should be presented in the next IMIS progress report to the General Assembly, and thereafter if and when requested by the General Assembly.	This issue will be addressed in the eleventh progress report, to be submitted to the General Assembly at its fifty-fourth session.

Annex III

Detailed justification for the additional resource requirement

General temporary assistance

1. Total expenditure under general temporary assistance as of December 1997 amounted to $12.3 million.

2. The resource requirement for the period 1998 until project completion is estimated at $8.2 million. The revised amount would cover the revised staffing requirement indicated in table III.1.

3. The requirement under this heading is related to implementation at offices away from Headquarters, and reflects the need for extension, until project completion, of the implementation team and local implementation coordinators at offices away from Headquarters, and the payroll development team to assist in the implementation of payroll at offices away from Headquarters. Taking into account one of the recommendations of the independent experts, a provision has been included to upgrade one P-4 staff member to the P-5 level to serve as head of the implementation team for offices away from Headquarters.

4. Furthermore, offices away from Headquarters will need additional temporary staff for data collection and clean-up, building of bridges and interfaces, and verification of conversion as well as for operating the current systems while regular staff is engaged in implementation activities, such as training, review of local procedures, and revisions of manual and desk procedures to bring them in line with the local requirements. While some of that activity will be undertaken within the existing resources, it is estimated that those will not be sufficient. It is estimated that $1.5 million would be required for this activity under general temporary assistance for approximately 126 work months for the seven duty stations.

5. It is recognized that familiarization with software through hands-on experience would be needed, in addition to training, for staff away from Headquarters in the implementation of the system at these offices. Accordingly, it is anticipated that finance staff from offices away from Headquarters would be brought to Headquarters for short periods to get familiarized with software and to work with the IMIS team in the preparation of updated training material, conversion programmes and other utilities that may be needed to facilitate implementation and operations at those offices. In addition, they would be familiarized with the various standardized queries that are being used at Headquarters to better monitor financial transactions. Since those staff members would need to be replaced at their duty stations during the period of their travel to New York, an amount of $104,300, corresponding to 8 work months, has been added under general temporary assistance to cover such costs as backstopping.

6. While a major effort is to be undertaken in the areas of IMIS reports, considerable difficulties have been encountered in attracting and retaining staff under appointments of limited duration. Most of the expenditures are, therefore, expected to be incurred under contractual services, by which qualified candidates will be recruited from several companies and engaged for this work. The staff costs originally earmarked for the reporting team has been reduced from the $0.9 million indicated in the ninth report to $0.3 million.

7. There has been no change in the requirement for resources to strengthen the Accounts Division to meet the additional workload relating to the implementation of and transition to Releases 3 and 4.

Table III.1
Estimated general temporary assistance expenditures for the period 1998 until project completion

Item	*Previous projection (ninth progress report)[a] (thousands of United States dollars)*	*Item as revised*	*Revised projection[b] (thousands of United States dollars)*	*Increase/decrease as compared to estimates provided in ninth report[a] (thousands of United States dollars)*
Release 4 (Payroll)	461.9	**Release 4 (Payroll)**	467.8	5.9
1 P–4 Payroll coordinator		1 P–4 Payroll coordinator (24 wms)		
1 P–3 Payroll Analyst		1 P–3 Payroll Analyst (24 wms)		
Implementation at offices away from Headquarters	3 117.9	**Implementation at offices away from Headquarters**	3 813.0	695.1
1 P–5 Implementation Coordinator for offices away from Headquarters		1 P–5 Team leader (25 wms) 1 P–5 Implementation Coordinator for offices away from Headquarters (24 wms)		
7 P–4 Coordinators for offices away from Headquarters		1 P–4 System accountant, NY (24 wms) 1 P–3 System accountant, NY (24 wms)		
2 P–4 Systems Accountants		1 P–3 System accountant, GV (12 wms)		
2 P–3 Systems Accountants		7 P–4 Coordinators for offices away from Headquarters (34 wms each) Replacement of staff at OAHs (8 wms)		
Reporting team	900.9	**Reporting team**	261.8	(639.1)
1 P–4 3 P–3 1 P–2 (three months)		2 P–3 (15 wms each)		
Accounts Division support	2 169.8	**Accounts Division support**	2 169.8	0.0
3 P–4 4 P–3 5 General Service (Other level)		3 P–4 (24 wms) 4 P–3 (24 wms) 5 General Service (Other level) (24 wms each)		
		Data collection and clean-up, construction of bridges and interfaces, implementation activities at OAHs (126 wms)	1 500.0	1 500.0
Total	**6 650.5**		**8 212.4**	**1 561.9**

[a] See A/52/711, annex I, first table.
[b] See table in main report.

Contractual costs

8. As reported in the ninth progress report, the projected costs under this category as of December 1997 were $36.9 million. Compared to that estimate, the actual expenditure under this category was $37.6 million. The resource requirement for the period 1998 until project completion is estimated at $8.2 million, as reflected in table III.2.

9. It was envisaged at the time of preparing the previous estimate that an amount of $300,000 would be required under contractual services for the development of additional reports, mainly for travel, payroll and accounts. Taking into account the need to continue developing additional reports and the recommendation of the Board of Auditors in that regard, that estimate has been revised to $1.5 million. The increase of $1.2 million would be required to maintain contractors on board during 1999. It is anticipated that by then, the required reports identified to date will have been developed, and the design and development of additional reports would be taken over by the maintenance units in the various offices under the Department of Management.

10. It is anticipated that the need for certain out-of-scope changes would arise during the design and testing of payroll. In order to cover such out-of-scope items, it is estimated that $0.5 million would be required.

11. As recommended by the independent experts, it is expected that the services of a number of staff of the main contractor would be required after the completion of the contract. These staff would be used as resource persons to assist the Accounts Division and the IMIS team in matters arising during the implementation of Releases 3 and 4 at offices away from Headquarters. This would also facilitate the transition of system maintenance from the contractor to the United Nations. It is anticipated that four contractors staff would be required to provide the required services during the transition. The requirement for this purpose is estimated at $1.1 million.

Table III.2
Resource requirements, 1998 to project completion

Contractual services	*Estimates per ninth report[a] (thousands of United States dollars) (1)*	*Actual expenditure up to end-1997 (thousands of United States dollars)[b]*	*Contractual services, revised requirements*	*Revised total projection[b] (thousands of United States dollars) (2)*	*Increase/decrease as compared to estimates provided in A/52/711, annex I, second table (thousands of United States dollars) (2)–(1)*
Budgeted up to end-1997, including additional requirements through 1997 (out-of-scope items, implementation support, bridges, interfaces, reports and monitoring tools)	36 871.7	37 581.1		37 581.1	709.4
Additional requirements after 31 December 1997	5 378.0		Additional requirements after 31 December 1997	8 178.0	2 800
Additional functionalities for Release 4 and changes to Releases 1, 2 and 3 for payroll ($1,000,000)			Additional functionalities for Release 4 and changes to Releases 1, 2 and 3 for payroll ($1,000,000)		
Completion of changes to Release 2 and education grant implementation ($340,000)			Completion of changes to Release 2 and education grant implementation ($340,000)		
Development of additional reports (travel and payroll) ($300,000)			Development of additional reports ($1,500,000)		
Changes to Release 3 (contractual services required to resolve priority issues) ($3,738,000)			Changes to Release 3 (contractual services required to resolve priority issues) ($3,738,000)		
			Contractual Services for analysing the problems arising after the implementation of Release 4, and the enhancement necessary Releases 3 and 4 during the transition ($1,100,000)		
			Out-of-scope items ($500,000)		
Total	**42 249.7**	**37 581.1**		**45 759.1**	**3 509.4**

[a] See A/52/711, annex I, second table.
[b] See table III.1 above.

Annex IV

Actions taken in response to the recommendations contained in the report of the Board of Auditors of 10 December 1997 on the Integrated Management Information System

Recommendation	*Comments*
(a) The Administration should draw up a plan of action for completion of the personnel-related tables in the database within a specified time-frame, and should periodically review the accuracy of the data;	It was indicated to the Board of Auditors that the tables referred to concern only 5 per cent of all human resources data in the system, and that in some instances they were not required until implementation of Release 4, of travel and of education grant. With the implementation of Release 2, most of the reference tables have been populated. The remaining will be populated in conjunction with the implementation of payroll, and within the framework of human resources reform activities. A project to populate the staff skills-related data is already under way. The Office of Human Resources Management has also initiated a review of the recruitment functionalities to determine the modalities for their implementation (see annex I, para. 5).
(b) The Administration should analyse the reasons why Release 2 did not work, draw up a plan of action to enable Release 2 to align with the staff entitlement rules, and formulate a timetable for activating the system;	Action along the lines recommended by the Board of Auditors was already well advanced when the report was issued. By then, the Office of Human Resources Management, the Office of Programme Planning, Budget and Accounts and the IMIS project team had established a detailed plan, and the changes to the system were being made and tested. As reported in detail in paragraphs 2 to 13 of the present report, Release 2 was successfully implemented at Headquarters in April 1998. It has since then been implemented at Addis Ababa, Bangkok, Beirut, Geneva, Santiago and Vienna. It has also been implemented by UNDP. UNICEF is scheduled to implement it during the last quarter of 1998. It is scheduled to be implemented at Nairobi during the fourth quarter of 1998 and by ILO early in 1999.
(c) The Administration should expedite development of a formal set of diagnostic tools to improve the quality and reliability of data recorded in IMIS;	As of February 1998, eight diagnostic tools have been developed and run on a regular basis. They monitor the status of funds, ledger balances and ledger entries, funds and documents balances in ledger entries, interfund balances, obligations and pre-encumbrances, obligation document details and payable documents. The results confirm both the audit ability, the reliability and stability of the system (see annex I, para. 21).
(d) The Administration should treat as a high priority the development of regular reports in IMIS to facilitate the preparation of financial statements, in addition to resolving data integrity problems;	As of September 1998, there were 141 financial-related reports in production. These are supplemented by standard queries that have been made available to specialized users in the Office of Programme Planning, Budget and Accounts (see annex I, para. 46).

Recommendation	*Comments*
(e) The Administration should draw up a comprehensive plan of action indicating time schedules and resources needed to resolve all the outstanding problems generated in IMIS;	*Release 2* was implemented at 7 of the 8 duty stations. It will be implemented at the remaining station during the last quarter of 1998. Enhancements to *Release 3* will be implemented at Headquarters in January 1999. *Release 3* will be implemented at all duty stations except Nairobi in 1999; it will be implemented at Nairobi in February 2000. *Releases 4 and 5* will be implemented at Headquarters in August 1999, and at ESCWA during the last quarter of 1999. They will be implemented at the remaining offices between January and August 2000. Many issues and problems have been addressed, as described in the present report, and a major set of enhancements to Release 3 will be implemented in January 1999. It will never be possible to address "all" the issues, both of a policy or a technical nature, that are identified. Priorities are established and are addressed on an ongoing basis. The level of resources estimated to be required until the completion of the implementation of the system at all duty stations is indicated in paragraphs 7 to 32 of the present report and in annex III.
(f) The Administration should amend the IMIS contract to update the list of deliverables and the work plan and use them to monitor payments and deliverables;	The list of outstanding deliverables for Releases 4 and 5 has been defined, and an amendment to the contract to reflect all of them is being finalized (see para. 10; and annex V, comment on request 9).
(g) The Administration should clearly define system enhancement requests in order to ensure the contractor bears responsibility for carrying out work that is within the scope of the contract;	The contract has been revised and all tasks that have to be performed by the contractor as out of scope have been itemized and clearly identified (see para. 10; and annex V, comment on request 9).
(h) The Administration should secure adequate in-house expertise on the logic, hard codes and other technical features of the system in order to reduce dependence on the IMIS contractor;	Apart from the enhancements that have been requested from the contractor, ongoing maintenance is already being performed by United Nations staff. Candidates for all posts but one have been recommended, and the cases are being processed by the Office of Human Resources Management. As of the end of September 1998, five new staff were waiting for the completion of the recruitment formalities. In parallel, 10 UNDP staff have also been working at the IMIS development and at UNDP-related enhancements. Close cooperation has been established between the two organizations for joint efforts in this area. As indicated in paragraph 9, limited support is expected to be required in the future from the main contractor

Recommendation	*Comments*
(i) The Administration should deploy sufficient qualified manpower to develop in-house capacity to manage the system;	In the Office of Human Resources Management, the Human Resources Management Information Section has been strengthened, and plans are being made to better define its role and responsibilities, including in monitoring and reporting. Within the Office of Programme Planning, Budget and Accounts, both technical and substantive expertise is being strengthened. Training courses are being held regularly to enhance the substantive knowledge of the system. Within the Office of Conference and Support Services, plans are being finalized to create a policy and systems section for the Office, within existing resources. These plans are being drawn taking into account the recommendations of the independent experts in this area (see annex II, recommendation 7).
(j) The Administration should regard as a high priority the full implementation of the long-term maintenance plan of IMIS, which should take into account the requirements and responsibilities of user offices;	See comments under recommendation (i) above; and annex II, recommendation 7.
(k) The Administration should overhaul the existing IMIS reporting facility application to make the extract tables easier to use, and develop a comprehensive reporting system to meet the requirements of different users for regular retrieval of information, thereby minimizing the necessity for ad hoc queries on the database.	The number and quality of the reports made available to the users as standard reports required by a large population on a regular basis has been greatly increased. Some needs required by the Office of Programme Planning, Budget and Accounts for the monitoring of its operations are and will continue to be satisfied through standard queries, as was the case with the old systems. Since they are needed by a limited number of highly specialized staff, these need not be incorporated into the main reporting facility. The capability added early in 1998 to the reporting facility to download selected data to standard office automation tools has greatly improved the availability of data for end users. The response time of the facility has been improved. The independent experts were satisfied with the work undertaken in this area (see also annex I, paras. 44 to 49).

Annex V

Actions taken in response to the requests contained in General Assembly resolution 52/227 on the Integrated Management Information System

Requests[a]	*Comments*
7. *Requests* the Secretary-General to take immediate action for the full implementation of the recommendations of the Board of Auditors, and to report thereon to the General Assembly at the main part of its fifty-third session;	The actions taken by the Organization are described in detail in annex IV.
9. *Requests* the Secretary-General to ensure strict adherence to the Financial Rules and Regulations of the United Nations in matters concerning control over expenditure on the Integrated Management Information System project, with particular reference to contractual costs, and to ensure that adequate administrative support is provided for the project in accordance with the recommendations of the Board of Auditors in paragraphs 25 and 27 of the annex to its report (A/52/755, annex);	All the 1998 expenditures incurred to date were based on the projections and plan of action described in the ninth progress report. All expenditures are associated with the expenditures plan for monitoring them and for immediate identification of variations between actual and planned expenditures. In terms of contractual costs, the Organization negotiated a fixed price contract for the remaining tasks to be completed by the main contractor. A detailed list of tasks is included in the contract, and expenditure is reported and verified task by task. All work is covered by a one-year warranty. Other contractual arrangements, in particular for the development of reports, are made with other companies after competitive process. Assistance in contractual matters is provided to the Chief of the project by the Procurement Division, and a clerk has been assigned to the project to assist in administrative matters.
10. *Also requests* the Secretary-General to determine contractor responsibilities in the changes in the Integrated Management Information System in order to limit unnecessary payments by the Administration;	One of the items that was negotiated with the main contractor was the warranty issue on work that had been performed on *time and material basis*. The contractor reiterated and submitted evidence of the fact that it had absorbed more than 10,000 hours unbilled to the United Nations as a warranty for Release 3. Without acknowledging any undue invoicing, the contractor, as part of the negotiations, offered a credit of 500 additional hours to be used by the United Nations at its discretion. It also agreed, as indicated above, to signed a fixed price contract for the remaining out-of-scope work with a one-year warranty. All changes are well identified, and payments are made on the basis of the progress of work on each item.

Requests[a]	*Comments*
11. *Further requests* the Secretary-General to entrust the Office of Internal Oversight Services with conducting a comprehensive analysis of the reasons for the increase in costs of the contract, and to submit a report thereon to the General Assembly no later than the end of the main part of its fifty-third session;	The report is being prepared by the Office of Internal Oversight Services.
12. *Requests* the Secretary-General to have independent experts conduct a forward-looking study of the Integrated Management Information System, to be financed from available resources of the Department of Management of the Secretariat, with no effect on the implementation of its mandate, and to submit a report thereon to the General Assembly, together with his comments, through the Advisory Committee, no later than the end of the main part of the fifty-third session, the purpose of the independent study being:	Two independent experts, civil servants from Brazil and Canada, conducted the requested study during summer 1998; the report is being submitted to the General Assembly under separate cover.
(*a*) To assess the System from a technical point of view, in terms of both design and operations, taking into account the specific requirements of the United Nations;	
(*b*) To advise on the long-term maintenance and operational requirements of the System in terms of the number and qualifications of staff, infrastructure and communications;	
(*c*) To advise on possible strategies for improving the System and optimizing maintenance costs;	
13. *Also requests* the Secretary-General to include in his tenth progress report a detailed plan of action and the final level of resources needed to resolve all outstanding problems so as to make the Integrated Management Information System fully operational, taking into account the main observations of the two reports referred to in paragraphs 11 and 12 above;	The actions taken and the plan of action are described in detail throughout the tenth progress report. The level of resources required until completion of the project, estimated taking into account the latest developments, the recommendations of the Board of Auditors and the recommendations of the independent experts, are included in annex III.

Requests[a]	*Comments*
14. ***Further requests*** the Secretary-General to reduce the dependency on the current contractor by limiting additional work to the minimum required to facilitate the implementation of the Integrated Management Information System project at offices away from Headquarters, and to take the necessary measures to have additional work performed by United Nations staff or by a contractor selected after competitive bidding;	The negotiations with the main contractor aimed to define the remaining tasks that it has to perform and to amend the contract accordingly. As indicated in paragraph 9 of the present report (see also annex III, para. 11), and in accordance with the independent experts' recommendations (see annex II, recommendation 6), some additional resources are requested to ensure a smooth transition after the completion of the contract in order to complete the transfer of knowledge necessary for the United Nations to take over full maintenance of the software. Some resources have been requested to finance possible requirements arising during the test of payroll, taking into account the requirements of offices away from Headquarters. No further work is foreseen, and the contractor has been notified accordingly. Other contractual work has been negotiated for the development and design of reports with several different companies, based on competitive selection of candidates submitted. No additional funding is requested for contractual work apart from the above tasks.
15. *Calls upon* the Secretary-General to ensure that a comprehensive programme for Integrated Management Information System training is included as part of the ongoing training programme offered to staff at all duty stations concerned;	In addition, the Office of Human Resources Management, in close cooperation with the IMIS team, has included IMIS operations and procedures in its newly created series of staff development programmes in human and financial resources management. IMIS-related issues will be integrated, as appropriate, in the design of new programmes. In addition, with the increased usage of IMIS, a more systematic training programme that includes development of videos, on-line training, on-line desk procedures and on-line context-sensitive help is being developed. Training sessions will be supplemented by regular users' group sessions, during which specific items would be discussed and, if necessary, further addressed in training sessions for larger groups of users. Plans are being developed to that end by the IMIS team, in consultation with the Office of Human Resources Management. The budgetary implications, incorporating increased training provisions, will be reflected in the programme budget proposals for the biennium 2000–2001.

Requests[a]	*Comments*
16. *Requests* the Secretary-General to ensure that adequate and qualified staff are assigned to the implementation and operation of the Integrated Management Information System at all duty stations.	Within the framework of the project budget for 2000–2001, the attention of all heads of offices is being drawn to the provisions of Secretary-General's bulletin SG/SGB/276 of 27 April 1995, which states, among other things, that heads of offices at designated duty stations away from Headquarters are responsible for the implementation and operations of the system in their respective offices, including adequacy of resources to coordinate implementation and daily operations of the system. Their attention has also been drawn to the need to ensure more adequate support for the information technology equipment and activities at their duty stations. The adequacy of the provisions made by each office in this respect will be reviewed within the framework of the project budget for 2000–2001 (see also annex IV, recommendation (i)).

[a] Paragraph numbers correspond to operative paragraphs of Assembly resolution 52/227 of 31 March 1998.